United States Environmental Protection Agency
Region 5

Date: DEC 0 2 1993

Subject: ACTION MEMORANDUM - Request for Approval to Initiate a Time-Critical Removal Action at the Jackson Drop Forge Site, Jackson, Jackson County, Michigan (Site ID #1U)

From: Jason H. El-Zein, On-Scene Coordinator
Emergency and Enforcement Response Branch - Section 1

To: William E. Muno, Director
Waste Management Division

Thru: for Jodi Traub, Acting Associate Division Director
Office of Superfund

I. PURPOSE

The purpose of this Action Memorandum is to obtain your approval to expend up to $1,815,000 to abate an imminent and substantial threat to public health and the environment which exists at the Jackson Drop Forge (JDF) site in Jackson, Jackson County, Michigan.

The JDF site presents a threat to public health because of the presence of an estimated 3,000 to 5,000 drums of industrial wastes which have been dumped onto the flood plain of the Grand River. Some of these waste drums are known to contain volatile organic compounds such as benzene, toluene, ethylbenzene, and xylene, and are suspected to contain a multitude of additional contaminants, including herbicides, pesticides, and heavy metals. Continued release of the contents of badly deteriorated drums of waste and dumped/buried waste sludge constituents is likely to occur until the site has been stabilized. Such releases present an imminent and substantial threat of direct contact and fire to the local human population and threaten to continue degradation of local groundwater and surface water of the Grand River. Additionally, the now-abandoned JDF facility proper contains an estimated 100 to 200 drums of industrial waste, electroplating wastes, including unsecured vats of highly toxic and corrosive chromic acid and a number of tanks which are suspected to contain fuels.

The proposed removal action will mitigate the potential for release of hazardous substances at the site by securing (fencing) the former facility proper, fencing drum dumping areas, prevent off-site migration of hazardous wastes/substances to surface water, removal of all surface waste drums to a more secure part of the site (facility proper) and initiation of disposal arrangements. The proposed response action is a time-critical removal.

The site is not on the National Priorities List.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID #MID0000056457

The JDF site is located at 2001 Wellworth Avenue and across Wellworth Avenue in the flood plain of the Grand River in Jackson, Jackson County, Michigan. JDF operated for over 40 years as a metal forging facility (or the "facility proper") for a wide range of industries which included oil and gas exploration, automotive/trucks, and train components. The JDF facility closed around 1989. Currently, there are approximately 100 to 200 drums that are accessible and open to the weather at the facility. Across the street from the facility several thousand drums and small containers are improperly disposed of in a flood plain of the Grand River and on private residential property without the property owner's consent. The flood plain area is bordered on the north by the Grand River and on the east, west, and south by vacant and residential property on Wellworth Avenue. The nearest private residence is located approximately 30 feet from the drums and small container dumping area.

On April 12, 1991, the Michigan Department of Natural Resources (MDNR) received a complaint from an anonymous caller that there were 3,000 drums located on the banks of the Grand River near the JDF site. The MDNR confirmed there were several hundred 55-gallon, 5-gallon, and 1-gallon containers at the site. The containers were in varying stages of deterioration, with a large number having leaked their contents into the surrounding environment. The MDNR interviewed the residents of 2050 Wellworth Avenue, directly south of the dumping area. One resident told MDNR that the drums were filled with a rubber sealant used to seal joints in highway concrete sections and he indicated that he used to work for the manufacturer in Michigan City.

In April 1993, the MDNR contacted the owners of the affected property concerning the complaint of improperly disposed of barrels on JDF property across from the JDF building and MDNR's plan to collect four samples from the barrels. The MDNR returned to the site again in July 1993 to collect four additional drum samples for analysis. In August 1993, the MDNR notified Jackson Innova Corporation, owners of JDF and some of the property where the drums were dumped, of their responsibilities and actions they needed to pursue.

On October 13, 1993, the MDNR verbally requested assistance from the United States Environmental Protection Agency (U.S. EPA) in conducting a site assessment of the JDF property. On October 18, 1993, U.S. EPA observed and documented the improper disposal of several thousand 55-gallon drums, 5-gallon containers, and 1-gallon cans. Most of the containers were in deteriorated conditions due to the apparent length of time they had been exposed to the weather. All of the containers were located in the flood plain of the Grand River with many standing in the water.

On October 25, 1993, the U.S. EPA conducted a preliminary sampling study of the flood plain and the JDF facility. Three soil samples and nine container samples were collected. Soil samples were analyzed for total and TCLP metals and PCBs. Container samples were analyzed for priority pollutants, pH, flash point, and reactivity.

Analytical results appearing in Table 1 represent concentrations of primary parameters analyzed in the drum and soil samples. Drum samples revealed the presence of solvents which include ethylbenzene and toluene. Flash point analysis revealed that three drums have a flash point below 140 degrees Fahrenheit (°F), which is considered a RCRA hazardous waste based on characteristic of ignitability (40 CFR part 261.21). pH analysis revealed that one drum has a pH level below 2 units, which is considered a RCRA hazardous waste based on characteristic of corrosivity (40 Code of Federal Regulations (CFR) 261.22). Soil analysis revealed that two samples have a TCLP level of lead above 5 mg/kg, which is considered a RCRA hazardous waste based on characteristic of toxicity (40 CFR 261.24).

On October 25, 1993, Gary Klepper, Supervisor of MDNR Jackson District Office, sent a letter to the U.S. EPA requesting immediate assistance to cleanup hazardous materials at the JDF site.

III. THREATS TO PUBLIC HEALTH, WELFARE, OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

Conditions at the JDF site present an imminent and substantial endangerment to public health or welfare or the environment based upon factors set forth in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR 300.415(b)(2). These factors include:

a) Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;

Analysis of drum samples collected by the MDNR and U.S. EPA on July 15, 1993, and October 25, 1993, documented the presence of volatile organic compounds (VOCs), toluene (51,000 ppm), ethylbenzene (22,000 ppm), xylene (2,100 ppm), benzene (38 ppb), chlorobenzene (31 ppb), and 1,1 dichloroethene (34 ppb). Access to the thousands of drums which have been dumped and piled into the flood plain of the Grand River is unrestricted and available to recreational users of the river, unsuspecting children playing in the area, and to nearby residents. This results in a potential direct contact threat to these

TABLE 1

U.S. EPA SOIL AND DRUMS SAMPLE RESULTS
JACKSON DROP FORGE SITE
JACKSON, MICHIGAN

Parameters	Soil			Drums								
	JDF1	JDF4	JDF7	JDF2	JDF3	JDF5	JDF6	JDF8	JDF9	JDF10	JDF11	JDF12
Lead (mg/l)	13[a]	29	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium (mg/kg)	10[b]	30	14	45	3.8	5.1	91	104	ND	279,000	ND	ND
Flash Point (°F)	NA	NA	NA	71	112	>200	>200	98	>200	>200	>200	>200
pH (units)	NA	NA	NA	7.6	7.3	8.4	7.9	6.5	8.5	1.3	7.9	9.3
Reactive Cyanide (mg/kg)	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	2,000	ND
Reactive Sulfide (mg/kg)	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	550
Ethylbenzene (mg/kg)	NA	NA	NA	22,000	0.21	ND	ND	410	1,400	ND	ND	ND
Toluene (mg/kg)	NA	NA	NA	31,000	1.5	ND	ND	170	ND	ND	ND	ND

a - Results are TCLP
b - Results are totals
NA - Not Analyzed
ND - Not Detected at instrument detection limit

parties. At the same time, deterioration of these thousands of drums is extreme. Many drums are open and leaking and have released their contents into the flood plain. As water levels along the drum area increase, spilled contaminants are washed or leached into the river.

The presence of 100 to 200 drums of industrial wastes at the abandoned facility proper poses a similar direct contact concern. This facility is not secure, many of the site's buildings have no doors, none have locked doors. Drum samples collected by TAT contractor personnel on October 25, 1993, documented the presence of highly corrosive materials (pH - 14) contained in open drums. Leaking vats of plating solution (suspected chromic acid) likewise pose extreme direct contact threat to unknowing children or any member of the public accessing the site.

b) Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release;

As previously mentioned, virtually all of the estimated 3,000 to 5,000 surface drums at the site are in poor, deteriorated condition. Many have already released their contents to the surrounding soils and surface water. High levels of lead in the soil are an indication of release. Continued release will surely occur until these drums and their contents are removed from the flood plain and the remaining contaminated soils and fill are isolated from the river or otherwise prevented from contaminating the river.

c) High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate;

Observation of the drum/sludge dumping area reveals that the area was used to landfill bulk industrial waste sludges in the flood plain of the Grand River. The absence of cover material over these sludges, some of which have a wet, oily appearance, allows contact with the Grand River to readily occur. This contact, along with the contact from spilled, leaked wastes from deteriorated drums, is very certainly causing migration of waste constituents to the river's surface water and sediment. Analytical results of samples collected from the site soil have revealed high levels of lead (see Table 1).

It is highly suspected that additional drums, perhaps several thousand, may be buried in the flood plain along with loose waste sludges. Constituents of these wastes will continue to migrate to the river until action is taken to prevent such migration.

d) Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released;

Upcoming fall, winter, and spring weather conditions will cause the drums of waste to enter yet another cycle of flood conditions whereby contaminants and whole drums will be moved into the main river channel. Freeze/thaw conditions of winter will cause further degradation of container integrity and result in additional drums releasing their contents to the river and flood plain.

e) Threat or fire and/or explosion;

Analytical results (flash point <140°F) of waste in the drum disposal area and at the facility itself show that the waste is capable of sustaining ignition at both locations. Any uncontrolled fire at either location would likely result in the emission of extremely hazardous byproducts of incomplete combustion of the myriad of hazardous contaminants suspected to be present. Such emission would require emergency evacuation/relocation of residents downwind of the site.

f) The availability of other appropriate Federal or State response mechanisms to respond to the release;

The MDNR has requested that U.S. EPA institute response action at the site since it has no funding resources to perform a cleanup itself. This request was made by Gary Klepper of the MDNR in a letter dated October 25, 1993.

IV. ENDANGERMENT DETERMINATION

Given the nature of the site, the unrestricted access to contaminants, the location of wastes in the flood plain of the Grand River, the nature of these hazardous substances (caustics (D002), flammables (D001), solvents, and lead), and exposure pathways which include direct contact between the public and hazardous substances, and migration through ground and surface waters, if not addressed by implementing the response action proposed in this action memorandum, may present an imminent and substantial endangerment to nearby residents or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

The purpose of this removal action is to mitigate the imminent and substantial threats posed to public health or welfare and the environment.

The following removal activities are proposed:

1. Develop and implement a site health and safety plan;

2. Develop and implement an air monitoring program during site activities;

3. Establish site security, including restricting access to the site by upgrading existing fences and gates around the facility and by installing new fencing around the drum dumping areas;

4. Prevent off-site migration of hazardous wastes/substances to surface water;

5. Identify, inventory, and characterize hazardous substances/wastes in drums, small containers, vats, and tanks, and properly dispose of hazardous wastes at RCRA/CERCLA-approved facilities in accordance with the U.S. EPA off-site policy;

6. Identify all waste burial locations at the site;

7. Remove and dispose of grossly contaminated surface soil associated with leaking drums and other containers; and

8. Perform an extent-of-contamination study to determine the extent to which soil, groundwater, and surface water on and around the site may have been impacted by hazardous waste deposition.

Removal activities will require approximately 100 working days to complete. The threats posed by the drums, small containers, vats and other containers, and contaminated surface soil meet criteria listed in Section 200.415(b)(2) of the National Contingency Plan (NCP) and are consistent with any long-term remedial action which may be required.

The OSC has begun planning for the provision of post-removal site control, consistent with the provisions of Section 300.415(k) of the NCP. The nature of this removal, elimination of all surface threats, is, however, expected to minimize the need for post-removal site control.

Results of the extent-of-contamination study will be turned over to pre-remedial program for consideration under SACM and/or remedial action.

The detailed contractor costs are presented in Attachment 1 and estimated project costs are summarized below:

EXTRAMURAL COSTS:

Cleanup Contractor Costs	$1,100,000
Contingency (15%)	165,000
Subtotal	$1,265,000
Total TAT, including multiplier costs	150,000
Extramural Subtotal	$1,415,000
Extramural Contingency (20%)	283,000
TOTAL, EXTRAMURAL COSTS:	$1,698,000

INTRAMURAL COSTS:

U.S. EPA Direct Costs [$30/hr x (1,200 Regional + 120 HQ hrs)]	$ 40,000
U.S. EPA Indirect Costs [$64/hr x (1,200 Regional hrs)]	77,000
TOTAL INTRAMURAL COSTS	$ 117,000
TOTAL REMOVAL PROJECT CEILING ESTIMATE:	$1,815,000

The response actions described in this memorandum directly address actual or threatened releases of hazardous substances, pollutants, or contaminants at the facility which may pose an imminent and substantial endangerment to public health and safety, and to the environment. These response actions do not impose a burden on affected property disproportionate to the extent to which that property contributes to the conditions being addressed.

Applicable or Relevant and Appropriate Requirements (ARARs)

All applicable or relevant and appropriate requirements (ARARs) of Federal law will be complied with to the extent practicable. A letter has been sent to the MDNR Emergency Response Division, Jackson, Michigan, office requesting that it identify State ARARs. Any State ARARs identified in a timely manner for this removal action will be complied with to the extent practicable.

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

If action is delayed or denied, public health and environmental concerns will continue and, if delayed too long, could increase health risks to nearby residents. Release or volatilization of hazardous substances or any fire could affect nearby residents and industrial areas.

VII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues associated with this site.

VIII. ENFORCEMENT

For administrative purposes, information concerning the enforcement strategy for this site is contained in an Enforcement Confidential addendum.

IX. RECOMMENDATION

This decision document represents the selected removal action for the Jackson Drop Forge site in Jackson, Jackson County, Michigan, developed in accordance with CERCLA, as amended, and is not inconsistent with the NCP.

This decision is based on the Administrative Record for the site, the index of which is Attachment 2. Conditions at the site meet the NCP, Section 300.415(b)(2) criteria for a removal and I recommend your approval of the proposed removal action. The total project ceiling, if approved, will be $1,815,000. Of this, an estimated $1,548,000 may be used for cleanup contractor costs. You may indicate your decision by signing below.

APPROVE: _____ DATE: 12/2/93
for Director, Waste Management Division

DISAPPROVE: _____ DATE: _____
Director, Waste Management Division

Enforcement Addendum
Attachments
1. Cleanup Contractor Cost Estimate
2. Index to the Administrative Record

cc: Alan Howard, Michigan Department of Natural Resources
Sheila Huff, U.S. Department of the Interior
Terri Johnson, U.S. EPA, OERR, 5202-G

ENFORCEMENT ADDENDUM

ENFORCEMENT CONFIDENTIAL

Redacted-information not relevant to the selection of the removal action.

ATTACHMENT 1

CLEANUP CONTRACTOR COST ESTIMATE
JACKSON DROP FORGE SITE
JACKSON, JACKSON COUNTY, MICHIGAN

NOVEMBER 1993

The estimated cleanup contractor costs are as follows:

Personnel and Equipment	$ 400,000
Transportation and Disposal	600,000
ERCS Subcontractors	100,000
TOTAL	$1,100,000

ATTACHMENT 2

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION

ADMINISTRATIVE RECORD
FOR
JACKSON DROP FORGE
JACKSON, MICHIGAN

November 19, 1993

DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
07/15/93	Masson, P., MDNR	Site File	Analytical Results	26
10/25/93	Klepper, G., MDNR	El-Zein, J., U.S. EPA	Letter Requesting U.S. EPA Assistance	1
10/28/93	El-Zein, J., U.S. EPA	Masson, P., MDNR	Letter Requesting State ARARs	1
11/01/93	Karl, R., U.S. EPA	Recipients	General Notice of Potential Liability	4
00/00/00	Lancaster, E., E & E	Pfundheller, J., U. S. EPA	Site Assessment (Pending)	
00/00/00	El-Zein, J., U.S. EPA	Muno, W., U.S. EPA	Action Memorandum (Pending)	